

REMARKS

1. Formal Matters

a. Status of the Claims

Claims 1-15 are pending in this application. Claims 1-15 are hereby canceled without prejudice to pursuing these claims in a continuing application. Claims 16-24 are new. Upon entry of these amendments, claims 16-24 are pending and under active consideration. Applicants respectfully request entry of the amendments and remarks made herein into the file history of the present application.

b. Amendments to the Claims

New claim 16 recites a nucleic acid consisting of X nucleotides wherein X is 19-140 nucleotides, support for which may be found throughout the application as originally filed. New claim 16 also recites that the sequence of the nucleic acid may comprise at least 19 consecutive nucleotides of SEQ ID NO: 399738, which corresponds to the sequence of GR204, support for which may be found at Table 2, lines 1436352-1436446, 1436449-1436543, 1436546-1436640, 1436643-1436738, and 1436935-1437029, and Table 10 lines 15448-15500 of the application as originally filed.

New claim 16 also recites that the nucleic acid may be an RNA equivalent of (a), support for which may be found throughout the application as originally filed.

New claim 16 is further directed to a nucleic acid that may be a sequence at least 80% identical to (a) or (b), support for which may be found at claim 1 of the application as originally filed.

New claim 16 further recites that the nucleic acid may be: the complement of any one of (a)-(c), support for which may be found throughout the application as originally filed.

New claim 17 is directed to the nucleic acid of claim 16, wherein the at least Y nucleotides is of a sequence selected from the group consisting of SEQ ID NOS: 399404, 399423, 399424, 399427, and 399441, support for which can be found at the sequence listing as originally filed.

New claim 18 recites the nucleic acid of claim 16, wherein the at least Y nucleotides is of a sequence selected from the group consisting of SEQ ID NOS: 14005, 14011, 14020, 14039, 14046, and 14051, support for which can be found at the sequence listing as originally filed.

New claim 19 is directed to a nucleic acid of claim 16, wherein $X=Y$, support for which can be found at claim 16 as described above.

New claim 20 recites the nucleic acid of claim 19, wherein Y consecutive nucleotides is of a sequence selected from the group consisting of SEQ ID NOS: 399404, 399423, 399424, 399427, and 399441, support for which can be found at the sequence listing as originally filed.

New claim 21 is directed to the nucleic acid of claim 19, wherein Y consecutive nucleotides is of a sequence selected from the group consisting of SEQ ID NOS: 14005, 14011, 14020, 14039, 14046, and 14051, support for which can be found at the sequence listing as originally filed.

New claim 22 recites a vector comprising an insert, wherein an insert consists of the nucleic acid of claim 16, support for which can be found at paragraph 0037 of the application as originally filed.

New claim 23 is directed to a vector comprising an insert, wherein an insert consists of the nucleic acid of claim 19, support for which can be found at paragraph 0037 of the application as originally filed.

New claim 24 a method for detecting the nucleic acid of claim 18, comprising providing a biological sample and measuring the level of the nucleic acid, wherein a difference in the level of the nucleic acid compared to a control is indicative of the presence of the nucleic acid, support for which can be found at paragraph 0036 of the application as originally filed.

c. Amendments to the Specification

Paragraph 0029 is amended to incorporate the sequence listing by reference.

d. Election/Restrictions

On pages 2-8 of the Office Action, the Examiner requires restriction to one of the following inventions under 35 U.S.C. § 121:

- I. Claims 1-4, drawn to an isolated oligonucleotide that anneals to a portion of a mRNA transcript of a target gene, wherein said oligonucleotide has at least 80% sequence identity with a nucleotide sequence selected from SEQ ID NOS: 1-14456.
- II. Claims 5 and 6, drawn to an isolated oligonucleotide that anneals to a portion of a mRNA transcript of a target gene associated with HIV-1 infection, wherein

said oligonucleotide has at least 80% sequence identity with a nucleotide sequence selected from SEQ ID NOS: 1, 3, 5, and 63804-66308.

- III. Claims 7 and 8, drawn to an isolated oligonucleotide that anneals to a portion of a mRNA transcript of a target gene associated with HIV-2 infection, wherein said oligonucleotide has at least 80% sequence identity with a nucleotide sequence selected from SEQ ID NOS: 1, 3, 5, and 63309-68740.
- IV. Claims 9 and 10, drawn to an isolated oligonucleotide that anneals to a portion of a mRNA transcript of a target gene associated with Human adenovirus A, wherein said oligonucleotide has at least 80% sequence identity with a nucleotide.
- V. Claims 11 and 12, drawn to an isolated oligonucleotide that anneals to a portion of a mRNA transcript of target gene associated with Human herpesvirus 1, wherein said oligonucleotide has at least 80% sequence identity with a nucleotide sequence selected from SEQ ID NOS: 1, 3, 4, and 29296-31435.
- VI. Claims 13 and 14, drawn to an isolated oligonucleotide that anneals to a portion of a mRNA transcript of target gene associated with Human herpesvirus 4, wherein said oligonucleotide has at least 80% sequence identity with a nucleotide sequence selected from SEQ ID NOS: 1, 3, 4, and 36686-40656.
- VII. Claim 15, drawn to a method for bioinformatics detection of microRNA oligonucleotides.

Applicant elects without traverse Group I, which now is considered claims 16-24, drawn to an isolated nucleic acid, a vector comprising the nucleic acid, and a method for detecting the nucleic acid.

e. Restriction to a Single Nucleotide Sequence and mRNA target gene

On pages 8-10 of the Office Action, the Examiner requires restriction to a single nucleic acid sequence for the elected Group I under 35 U.S.C. § 121. Applicant elects with traverse nucleic acids related to SEQ ID NO: 399738, which is associated with claims 16-24 for further prosecution.

The Examiner is permitted under 35 U.S.C. § 121 to issue a restriction requirement between independent and distinct inventions. However, the Director has partially waived the requirements of 37 C.F.R. § 1.141 *et seq.* to permit a reasonable number of nucleotide sequences

to be claimed in a single application. *See Examination of Patent Applications Containing Nucleotide Sequence*, 1192 O.G. 68 (November 19, 1996). It has been determined that normally **ten** sequences constitute a reasonable number for examination purposes absent an exceptional case. *See* MPEP 803.04.

The Examiner has failed to demonstrate that the claimed sequences are an exceptional case necessitating that the number of sequences to be selected be less than ten. Applicant respectfully submits that the Examiner is impermissibly disregarding the waiver of 37 C.F.R. § 1.141 *et seq.* Accordingly, Applicant respectfully requests reconsideration of the restriction requirement and the opportunity to elect up to ten sequences for further prosecution.

2. Conclusion

Applicant respectfully submits this application is in good and proper order for substantive examination.

Respectfully submitted,

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